

PROCEEDINGS
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ON A SMALL COLLECTION OF MAMMALS FROM
HAMILTON INLET, LABRADOR.

BY OUTRAM BANGS.

In the early summer of 1895 Mr. C. H. Goldthwaite started for Hamilton Inlet, Labrador, to collect mammals for the Bangs' Collection. Upon reaching St. Johns, Newfoundland, he was met by the discouraging news that on account of the troubles of the government and the low state of its finances, there was some doubt as to whether its steamer would make the usual annual trip up the Labrador coast for the purpose of carrying supplies and picking up shipwrecked fishermen and explorers. Most of the fishing vessels that visit Labrador in summer had already sailed, but after much delay and trouble he secured passage from Conception Bay in a belated fisherman, and finally arrived at Hamilton Inlet, after a long and tedious voyage.

Here he collected from July 5 to September 9, in the immediate vicinity of the Hudson Bay post of Rigoulette, about eighty miles up Hamilton Inlet, or Grosswater Bay, as it is usually called by the inhabitants. I had hoped that his work would cover a larger area, and that he might get far enough from the post to collect fur-bearing and other large animals, but this proved impossible. The only way to make such a trip successfully would be to go prepared to remain throughout the winter. In summer the inhabitants are all busy with salmon fishing, their principal means of subsistence, and cannot be induced to go inland, even if this were practicable. The heavy growth of moss, saturated with moisture, into which a man sinks above the knee at every step,

makes traveling so laborious as to be nearly impossible, while the constant annoyance from the attacks of blood-sucking flies of four or five kinds becomes almost intolerable. In winter traveling on snow-shoes or on dog sledges is very easy. Then all the men go inland to their various trapping grounds and stay through the season, and if a collector went along with them he could undoubtedly reap a rich harvest. The country about Rigoulette is heavily wooded with a rather stunted growth of spruce and fir, but so near timber line is it that the tops of the hills are devoid of trees. In some places there were large fields of snow that remained unmelted throughout the entire summer. The country is monotonous and offers little diversity for trapping, and with the exception of the lemmings (*Dicrostonyx*), which inhabit only the treeless tops of the hills, all the smaller mammals live under about the same conditions.

In collecting small mammals anywhere one is sure to find some pest to interfere with trapping by eating specimens or bait, or both, and Hamilton Inlet was no exception to the rule. Mr. Goldthwaite's two principal enemies were the Labrador jay and the Esquimaux dog. The jays soon discovered what he was doing, and would follow him in a loose flock, sitting about and watching while he set a trap, and would then descend upon it and steal the bait the moment his back was turned. Often one of them fell a victim to the wicked little Schuyler trap, but this never deterred the others, and no matter how many were killed, there were always as many more following him. The dogs were even worse, for turned out in the summer to forage for themselves, they hunt over the country in packs for miles in every direction. They feed largely on mice, lemmings, and all small mammals, and were very quick to find one caught in a trap. Several of the dogs also got into baited steel traps, and as they are highly prized, especially the leaders. Mr. Goldthwaite was requested by the owners to refrain from setting steel traps at that season of the year.

Mr. Goldthwaite collected the following mammals:

***Lepus americanus americanus* Erxl.**

Abundant everywhere. A fine series of 14 young and adult examples has led me to take up a careful study of a large number of specimens of the American hare from many points in eastern North America, the results of which will be published in a separate paper.

The type of *Lepus americanus*, as is well known, came from the south side of Hudson Strait. Hamilton Inlet is not only much south of this, but appears to have quite a different fauna, the small mammals especially being different from those taken at Fort Chimo by L. M. Turner. It is therefore probable that typical *Lepus americanus* is even more extreme than the Hamilton Inlet series, which is at present the best working material available.*

Zapus hudsonius (Zimmerman).

Three specimens were caught in the damp mossy spruce woods.

Fiber zibethicus (Linn.)

Muskrats were very scarce about Hamilton Inlet, but were said to be abundant in the lakes and rivers of the interior. The one specimen collected, an adult, agrees in every way with true *zibethicus* of northeastern North America generally, and shows no approach to the insular form (*Fiber obscurus*) found in Newfoundland.

Dicrostonyx hudsonius (Pallas).

Three specimens of the Hudsonian lemming were secured, all taken at the entrance to one hole on top of a treeless hill. A fourth was also trapped at the same hole, but afterwards destroyed. The lemming was well known to the natives, who called it 'hill mouse,' and said it was usually abundant on all the hills. Mr. Goldthwaite worked very hard to get more, but the dogs had visited all suitable places and dug out the lemmings before he arrived, and the hole where he caught his specimens was the only one he could find that was occupied.

Mr. Gerrit S. Miller, Jr., who examined these specimens at the time he wrote his 'Genera and Subgenera of Voles and Lemmings,' tells me that this lemming is not like any of the old-world species. The name *Mus hudsonius* Pallas † apparently applies to this species, which may be briefly described as follows:

Color.—Upper parts gray (about the color of a Maltese cat), somewhat mixed with black tipped hairs and slightly touched in places with rusty; a narrow black stripe along middle of back; long hairs covering ear, mixed black and rusty; a spot of pale yellowish rust color at base of whiskers. Lower sides and under parts dull brownish gray, irregularly washed with rusty, the rust color predominating in front of arms, across

* The Arctic Hare is said to occur at Hamilton Inlet, but Mr. Goldthwaite was unable to get one. It was reported to be more abundant in winter than in summer.

† Richardson (Fauna Boreali-Americana, 1829, p. 132) refers the specific name *hudsonius* to Forster. I cannot find that Forster ever gave his animal (a mutilated specimen) a scientific name, merely styling it 'a small animal called a Field Mouse. Churchill River.'

chest, and about vent. Feet, hands, and tail dull gray, hairy. Tail with a long pencil nearly equaling length of tail.

Measurements.—The three specimens measured as follows:

No.	Sex.	Total length.	Tail vertebræ.	Hind foot.
4166	♂ old.	150	21	20
4167	♂ yg. ad.	145	22	22
4168	♂ yg.	128	16	20

Skull.—The skull of 4166, ♂ old adult, measures: basal length, 28.6; zygomatic breadth, 19.8; mastoid breadth, 14.2; alveolar length of upper molar series, 7.6; incisive foramen, 5.6. That of an adult male *D. torquatus* from Petschora, Russia (No. 3621, collection of Gerrit S. Miller, Jr.), measures: basal length, 27.4; zygomatic breadth, 19; mastoid breadth, 14; alveolar length of upper molar series, 7.4; incisive foramen, 6.8.

These specimens are of approximably equal age, so that they furnish a very satisfactory basis for comparison. The skull of *D. torquatus*, though actually slightly smaller, gives the impression of greater strength and massiveness. This is chiefly due to its broader, less deflected rostrum and slightly shorter, broader brain case. While the width of rostrum is less and the deflection of dorsal outline greater in *D. hudsonius*, the rostral depth at the root of the zygoma is slightly greater in *D. torquatus*. Audital bullæ in *D. hudsonius* distinctly larger and less globular than in *D. torquatus*.

Teeth.—As has recently been pointed out,* there is a minute supplemental anterior internal loop in the posterior lower molar of *Dicrostonyx hudsonius* which is apparently absent in the Old World species. Otherwise the dentition calls for no special comment.

Synaptomys (Mictomys) innuitus (True).

Only one specimen was collected. Dr. C. Hart Merriam and Mr. Gerrit S. Miller, Jr., have kindly compared this specimen with the type of *innuitus* from Fort Chimo, Labrador, with the following results: The Hamilton Inlet specimen is younger than the type of *innuitus*, but is larger, the hind foot measuring 3 mm. more and the skull being actually larger; the tail is also longer. It is a pity that only one specimen from each locality is in existence, as more material from Labrador would probably show that two well marked forms occur there, as is the case with *Ecotomys* and probably with *Phenacomys ungava* also. The measurements of the specimen, No. 3972, ♂ young adult, are: total length, 114; tail vertebræ, 25; hind foot, 21.

* Miller, North American Fauna, No. 12, p. 39, foot-note, July 23, 1896.

Microtus enixus Bangs.*

Next to *Evotomys*, this species was the commonest small mammal about Hamilton Inlet. It was found living everywhere, but was especially abundant along the banks of the brooks where a few reeds and grasses grew; 80 specimens were obtained.

It is very distinct from all other eastern voles, and is at once distinguished by its peculiarly small, weak, molar teeth. (See figure 13.)

Evotomys proteus Bangs.†

The *Evotomys* was the commonest small mammal, and was found everywhere. No less than 99 specimens were collected. Several times while walking through the forest Mr. Goldthwaite discovered one sitting upon a spruce branch 'like a squirrel.' I have never known of this arboreal habit being noticed in other species. The range of individual color variation in *Evotomys proteus* is simply astounding, and it seems incredible that extremes from the series can belong to the *same* species, yet any specimen picked out can be graded by the most delicate steps into any of the other extremes. The accompanying plate shows admirably a few of the most pronounced color phases.

The Hamilton Inlet and Fort Chimo red-backed mice are very different, representing opposite extremes in the genus. The latter, lately described by Vernon Bailey as *Evotomys ungava*,‡ is a small form with small hind foot, short tail, and little ears concealed by the fur. *E. proteus* is a very large form, with heavy skull, big feet and tail, and large ears.

Phenacomys ungava Merriam.

The 16 individuals of this interesting species that were caught were all found in one small area on the bank of a little brook, associated with *Microtus enixus* and *Evotomys proteus*. None were taken anywhere else. Mr. Miller had this series when he wrote his 'Synopsis of the Voles of the Genus *Phenacomys*,' and found that the form is much larger than true *P. ungava*. It is very possible that more specimens from Fort Chimo would show the Hamilton Inlet form to be worthy of separation.

*Preliminary Description of a New Vole from Labrador, American Naturalist, XXX, Dec. 5, 1896, p. 1051.

†In Vernon Bailey's Revision of the American Voles of the Genus *Evotomys*, Proc. Biol. Soc. of Washington, XI, May 13, 1897, p. 137.

‡Loc. cit., p. 130.

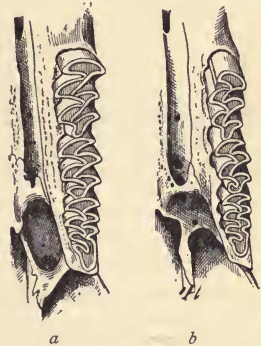


FIG. 13.—a. Left upper molar series of *Microtus pennsylvanicus* (Topotype No. 2336, Bangs coll.)

b. Left upper molar series of *Microtus enixus* (Topotype No. 3976, Bangs coll.)

Sciurus hudsonicus hudsonicus Erxl.

Red squirrels were not at all common, four being all that Mr. Goldthwaite was able to get, though constantly on the lookout for them.

Sorex personatus I. Geoffroy St. Hilaire.

This species is represented by one skull, kindly identified as *S. personatus* by Mr. Gerrit S. Miller, Jr.

It is strange that in all the trapping he did near Hamilton Inlet Mr. Goldthwaite caught but one shrew and no moles.*

Putorius cicognani cicognani (Bonaparte).

Mr. Goldthwaite's collection contained 2 specimens ♂ and ♀, which, though taken at a locality so strictly Hudsonian in character, are perfectly referable to the Canadian form, true *cicognani*. This would seem to indicate that typical *Putorius cicognani* pushes farther north in the east than it does in the central part of the continent. The two specimens collected measure as follows: No. 3951, ♂ adult: total length, 300; tail vertebrae, 90; hind foot, 43. No. 3952, ♀ young adult: total length, 256; tail vertebrae, 66; hind foot, 31.

Possibly another form may be found farther inland, as the spruce and fir forest only extends in a narrow belt along the coast, the whole interior being open 'barren grounds,' where the conditions of life must be different from those near the coast.

EXPLANATION OF PLATE IV.

A series of topotypes of *Evotomys proteus*, in collection of E. A. and O. Bangs, showing some of the color phases to which the species is subject. (All specimens are from Hamilton Inlet, Labrador.)

Fig. 1, No. 4054; Fig. 2, No. 4053; Fig. 3, No. 4068; Fig. 4, No. 4088; Fig. 5, No. 4085; Fig. 6, No. 4118; Fig. 7, No. 4139.

* One morning Mr. Goldthwaite saw several dogs nosing about a star-nosed mole (*Condylura cristata*) which they had caught but did not relish. One of them, however, instantly swallowed it when he tried to rescue it. He was unable to find any signs of this mole anywhere and secured no specimens.